REMARKS

The Office Action of February 23, 2009 has been reviewed and the Examiner's comments have been carefully considered. Claims 1-16 were previously cancelled in this application via a Preliminary Amendment, claims 17-31 are currently pending, and claims 17, 30, and 31 are amended by the present Amendment. No new matter has been added by way of these claim amendments. Accordingly, claims 17-31 are pending in the present application, and claim 17 is in independent form.

Priority

The Examiner is thanked for acknowledging Applicants' claim for foreign priority under 35 U.S.C. §119(a)-(d).

35 U.S.C. §112, Second Paragraph, Rejection

Claim 23 stands rejected under 35 U.S.C. §112, second paragraph, because the Examiner asserts that the minimum diameter of the hydrophilic core and lipophilic layers taken together would not fall within the range of 60-300 micrometers. Applicants respectfully disagree with this rejection.

Claim 23 is directed to granules having an average diameter in the range of 60-300 μm, said granules comprising a hydrophilic core with a diameter of at least 30 μm and a lipophilic continuous layer having a thickness of at least 10 μm. The granules, according to claim 23, must meet the requirement that the average diameter is in the range of 60-300 μm. Thus, individual granules may have a diameter below 60 μm, provided that there are enough granules having a diameter in excess of 60 μm to bring the overall average diameter to at least 60 μm. In other words, a granulate can have an average diameter of 60 μm, and at the same time contain granules comprising a hydrophilic core with a diameter of 30 μm and a lipophilic layer having a thickness of 10 μm.

Applicants note that even if claim 23 required (which it does not) that each granule has a diameter of at least 60 μm, this does not mean that such granule cannot have a hydrophilic core of 30 μm or a lipophilic layer of 10 μm. Indeed, if a particle has a hydrophilic core with a diameter of 30 μm, it is evident that the lipophilic continuous layer must have a thickness of at least 30 μm in order to meet the overall requirement that the granule has a

diameter of at least 60 μm. Likewise, if the lipophilic continuous layer of the granule has a thickness of 10 μm, the hydrophilic core clearly must have a thickness of at least 50 μm.

Reconsideration and withdrawal of the rejection of claim 23 is respectfully requested.

Prior Art Rejections

Claims 17-31 stand rejected under 35 U.S.C §103(a) for asserted obviousness over WO 98/32336 to Livermore (hereinafter, "Livermore") in view of WO 99/08553 to Kringelum (hereinafter, "Kringelum").

As reiterated by the Supreme Court in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 82 U.S.P.Q.2d 1385 (2007), the framework for the objective analysis for determining obviousness under 35 U.S.C. §103 is stated in *Graham v. John Deere*. Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg., No. 195 (October 10, 2007) at page 57527 (hereinafter "Examination Guidelines"). The factual inquiries enunciated by the Court are as follows:

(1) Determining the scope and content of the prior art;

(2) Ascertaining the differences between the claimed invention and the prior art; and

(3) Resolving the level of ordinary skill in the pertinent art.

Examination Guidelines at page 57527.

"The ultimate determination of patentability must be based on consideration of the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence." Manual of Patent Examining Procedure, (Sept. 2007) §716.01(d) and *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992).

Livermore teaches a bread improver comprising a latent enzyme preparation which is active during or after proving, but relatively inactive during mixing. Example 1 of Livermore describes the preparation of a granulate by coating an α-amylase agglomerate (having an average particle size of around 150 microns) with a fat containing 42% solid fat at 30°C. As already acknowledged by the Examiner, Livermore fails to teach an encapsulating layer containing at least 1% of a release agent selected from a group of monoglycerides, diglycerides, diacetyl tartaric acid ester of mono- and/or diglyceride (datem), stearyl-lactylates, and combinations thereof.

Kringelum teaches the encapsulation of a wide range of food additives. The encapsulating structure employed comprises "...an edible fatty component comprising a hydrophilic substance which does not in itself provide an encapsulation but which improves the characteristics of the encapsulation" (claim 1). Kringelum further teaches to employ as the edible fatty component monoglycerides, diglycerides, mono/diglycerides, triglycerides, and esters of mono- and diglycerides with organic acids, such as acetic acid, lactic acid, diacetyl tartaric acid or citric acid (page 12, lines 13-17).

Example 1 of Kringelum describes the preparation of encapsulated calcium propionate by mixing calcium propionate and a molten high melting monoglyceride, followed by spray cooling. The coated particles of calcium propionate have an average largest particle diameter of about 300 μm.

According to the Examiner, it would have been obvious to a person skilled in the art at the time of the invention to have combined the teachings of Livermore with the teachings of Kringelum to arrive at the claimed invention. At page 4 of the Office Action, the Examiner asserts that "The motivation to do so would have been to create a dough improver with desired characteristics in which the functional additive has an effect that is delayed until the desired part of the mixing and baking process."

Neither Livermore nor Kringelum teaches encapsulates in which the coating layer contains 50-98 wt.% triglyceride fat and 2-50 wt.% of a release agent, as defined by amended claim 17. A person of ordinary skill in the art would not read the combined teachings of Kringelum and Livermore and attempt to employ a coating layer that contains triglyceride fat and release agent in the aforementioned amounts.

Livermore teaches employing a coating layer that consists of triglycerides, whereas Kringelum teaches employing a coating layer that comprises monoglycerides, diglycerides, mono/diglycerides, triglycerides and esters of mono- and diglycerides with organic acids.

In order to arrive at the presently claimed invention, the combined teachings of Livermore and Kringelum would have to provoke a person of ordinary skill in the art to encapsulate with a coating layer containing at least 50-98 wt.% of triglycerides with a slip melting point of at least 30°C and 2-50 wt.% of a release agent. However, no hints or

suggestions can be found in either Livermore or Kringelum, that the combined use of triglycerides and one or more of the release agents defined in claim 17 would offer any benefits, let alone result in a gradual release during dough preparation, allowing the functional ingredient to exert some of its functionality early on during the dough preparation process (see page 4, lines 7-13). Indeed, both Livermore and Kringelum actually teach away from encapsulates that release the functional ingredient early on during the dough preparation:

> The inventors have therefore found that the problems associated with stickiness, low water holding capacity and softness at the mixing stage can be avoided if the improver enzymes are mixed in the dough in a latent state and activated during or after the proving stage. **(Livermore, page 2, lines 21-24)**

> However, when such enzymes are allowed to be active during the process of preparing a dough their activity may result in an undesirable development in the dough of 'stickiness'. Accordingly, it is advantageous to defer the enzymic activity until the dough has been prepared, i.e. until the baking process is initiated. **(Kringelum, page 11, lines 2-7).**

Applicants note that Kringelum teaches manipulating the release (disintegration) characteristics of the encapsulates described therein by employing a hydrophilic substance selected from glycerol, polyglycerols, and polysorbates (see page 13, lines 18-27). Thus, even if a person skilled in the art would have wanted to provide an encapsulate that gradually releases the encapsulant during dough preparation, as opposed to release during dough proving or baking, Kringelum teaches such a skilled person to employ the aforementioned hydrophilic substance. In other words, a person of ordinary skill in the art would have been motivated by Kringelum to incorporate a hydrophilic substance to manipulate the release characteristics of an encapsulate with a lipophilic coating layer. Consequently, it would not have been obvious for such a person of ordinary skill to employ in such a coating layer 2-50 wt.% of a release agent selected from the group of monoglycerides, diglycerides, datem, stearyl-lactylates and combinations thereof.

On page 4 of the Office Action, in paragraph 9, the Examiner states: "Furthermore, Livermore contemplates the use of 'attritional agents' which, the examiner equates with a release agent" (Pg. 6, Line 30). Applicants want to note that on pages 6 and 7, Livermore refers to the presence of an attritional agent in the dough, as opposed to the presence of such an agent in the coating layer of an encapsulate.

In light of the foregoing discussion, one of ordinary skill in the art at the time of the present invention would not have been able to combine the teachings of the cited references

in order to arrive at the subject matter of the claimed invention. Withdrawal of the rejection and allowance of independent claim 17 are respectfully requested. Claims 18-31 depend from, and add further limitations to claim 17. Therefore, Applicants submit that all of depending claims 18-31 should also be in condition for allowance.

Respectfully submitted,

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